

# Claims

- [c1] 1. An IP-based PBX system comprising:  
an IP-based PBX host for serving IP-based PBX extensions, the IP-based PBX host comprising:  
a routing module for connecting the IP-based PBX host to the Internet through a plurality of Internet connections with a plurality of corresponding IP addresses; and  
at least an IP-based PBX extension, each IP-based PBX extension selecting a first IP address from the IP addresses for connecting the IP-based PBX host, each IP-based PBX extension comprising:  
a storage unit for recording the IP addresses.
- [c2] 2. The IP-based PBX system of claim 1 wherein the IP-based PBX host receives packets outputted from a plurality of IP-based PBX extensions through all of the Internet connections.
- [c3] 3. The IP-based PBX system of claim 2 wherein if the IP-based PBX host detects that an Internet connection is unable to receive packets, the IP-based PBX host notifies the IP-based PBX extension to stop utilizing an IP address corresponding to the Internet connection.

- [c4] 4. The IP-based PBX system of claim 3 wherein the IP-based PBX host controls the IP-based PBX extension to remove the IP address corresponding to the Internet connection from the storage unit.
- [c5] 5. The IP-based PBX system of claim 1 wherein the IP-based PBX extension checks if the IP-based PBX extension is capable of connecting the IP-based PBX host through the first IP address, and the IP-based PBX extension selects a second IP address from the IP addresses for connecting the IP-based PBX host if the IP-based PBX extension is unable to connect the IP-based PBX host through the first IP address.
- [c6] 6. The IP-based PBX system of claim 1 wherein the IP connections are xDSL modems, cable modems, T1 connections, or other broadband connections.
- [c7] 7. A method of connecting an IP-based PBX host and at least an IP-based PBX extension, the IP-based PBX host being capable of serving the IP-based PBX extension through the Internet, the method comprising:
- (a) connecting the IP-based PBX host to the Internet through a plurality of Internet connections with a plurality of corresponding IP addresses;
  - (b) recording the IP addresses in the IP-based PBX extension; and

(c) utilizing the IP-based PBX extension to select a first IP address from the IP addresses for connecting the IP-based PBX host.

[c8] 8. The method of claim 7 wherein the IP-based PBX host receives packets outputted from a plurality of IP-based PBX extensions through all of the Internet connections.

[c9] 9. The method of claim 8 further comprising:  
if the IP-based PBX host detects that an Internet connection is unable to receive packets, notifying the IP-based PBX extension to stop utilizing an IP address corresponding to the Internet connection.

[c10] 10. The method of claim 9 wherein the IP addresses are stored in a storage unit of the IP-based PBX extension, and the IP-based PBX host controls the IP-based PBX extension to remove the IP address corresponding to the Internet connection from the storage unit.

[c11] 11. The method of claim 7 wherein step (c) further comprises:  
checking if the IP-based PBX extension is capable of connecting the IP-based PBX host through the first IP address; and  
utilizing the IP-based PBX extension to select a second IP address from the IP addresses for connecting the IP-

based PBX host if the IP-based PBX extension is unable to connect the IP-based PBX host through the first IP address.